UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 April 2008</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-13,15 and 17-46</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-13,15 and 17-46</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>3/25/08,5/14/08</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

a. This action is taken to response to amendments and remarks filed on
   4/1/2008.

b. Claims 1-13, 15, and 17-46 are pending in this Office Action. Claims 39-
   46 are new claims. Claims 1, 13, 15, and 28 are independent claims.

c. Rejections and/or objections not reiterated from previous office actions are
   hereby withdrawn.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-
type double patenting rejection is appropriate where the conflicting claims are not
identical, but at least one examined application claim is not patentably distinct from the
reference claim(s) because the examined application claim is either anticipated by, or
would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d
1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d
2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re
Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164
USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA
1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or
1.321(d) may be used to overcome an actual or provisional rejection based on a
nonstatutory double patenting ground provided the conflicting application or patent either
is shown to be commonly owned with this application, or claims an invention made as a
result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a
terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with
37 CFR 3.73(b).

Claims 1-13, 15, and 17-46 are <u>provisionally</u> rejected on the ground of

nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14,

16, and 18-40 of copending Application No. **10/526,504**. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the same limitations, for example, "selecting a data object having an identifier (ID) from the first storage location", are transparently found in application 10/526504 with obvious wordings variation.

Claims 1-13, 15, and 17-46 are <u>provisionally</u> rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 and 15-39 of copending Application No. **10/526,747**. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the same limitations, i.e., first ad second lock objects in application 10/526,749 are obviously used in lieu of transactional type lock object and permanent type lock object.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8, 23, and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation, "checking whether the ID for the data object has

been stored in the first lock object and if the ID has been stored, skipping storing the data

object at the second storage location". Since the ID for the data object will be stored in

the first lock object either before or after storing the ID in a second data object, do this

means that the data object will never be stored in the second storage location? Similar

problem exists in claims 23 and 35. Clarification is needed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described set forth
> in section 102 of this title, if the differences between the subject matter sought to be patented and the
> prior art are such that the subject matter a whole would have been obvious at the time the invention was
> made to a person having ordinary skill in the art to which said subject matter pertains. Patentability
> shall not be negatived by the manner in which the invention was made.

Claims 1-13, 15, 17-38 are rejected under 35 U.S.C. 103(a) being unpatentable

over Larsson et al. (US 5,548,750) in view of Cabrera et al. (US 6,269,382).

As per claim 1, Larsson et al. disclose **a method for moving data objects in a**

computer system from a first storage location to a second storage location, the

method comprising:

selecting a data object having an identifier (ID) from the first storage

location [Fig. 1, elements A' or C'];

storing the ID in a second lock object [objects in question have, according to

FIG. 6, been backup marked in the LID table of the local dam base; col 6, lines 45-47];

determining whether the ID is stored successfully in the second lock object

and, upon a successful storage, storing the ID in a first lock object, thereby

indicating that the data object is stored at the first storage location [Copying objects

to the backup area will, however, not start until the local data base handler has made all

changes from transactions to be included in the backup visible in the data base; col 6,

lines 14-17, data object is selected from first storage location with ID assigned, the

Examiner interprets this as indicating as stored at the first storage location, furthermore,

the backup handler indicates the data object is stored in first storage location, such as A

and C in Fig. 9];

storing the data object, at the second storage location [If it is equal to

"include" the object will be copied to the backup area, if it is equal to "exclude" the

object will not be copied but the value of the variable is set to "Include" as a preparation

for the next backup; col 8, lines 7-11];

deleting the data object, from the first storage location [Fig. 2, element Throw

old object]; and

deleting the ID from the second lock object after the ID has been stored in

the first lock object [If it is equal to "include" the object will be copied to the backup

area, if it is equal to "exclude" the object will not be copied but the value of the variable

is set to "Include" as a preparation for the next backup; col 8, lines 7-11; Fig. 14, col 2,

row 2, dbrecord is removed from the LID table].

Larsson et al. disclose moving data objects in a computer system from a first

storage location to a second storage location, as described in the previous paragraph.

However, Larsson et al. do not explicitly teach deleting the ID from the first lock object.

Cabrera et al. teach

deleting the ID from the first lock object, thereby indicating that the data

object is not stored at the first storage location, after the data object has been

deleted from the first storage location [During pre -migration, data resides in both local

and remote storage. Once the time for migration has arrived, local storage space may be

freed by simply <u>deleting</u> the data stored locally and retaining the data stored remotely,

abstract, Fig. 3, col. 11, line 46 to col. 12, line 6, This is indicated in FIG. 3 by step 68.

The process of recording the pre-migration of the data will depend upon the exact

implementation of the hierarchical storage manager. Essentially, this step is designed to

record an <u>indication</u> that a file has changed from a locally stored file to a pre-migrated

file, Step 70 of recording the migration can be accomplished in any manner sufficient to

<u>indicate</u> to the hierarchical storage system that the data has now been fully migrated to

remote storage].

Larsson et al. and Cabrera et al. are analogous are because they are in the same

general field transferring files between two storage locations.

At the time when the invention was made, it would have been obvious to a person

of ordinary skill in the art to modify the method of Larsson et al. to adapt the deletion of

the original data object after migrating to a second storage area. The motivation for doing

so would have been to allow local storage to be freed by simply <u>deleting</u> the data stored

locally and retaining the data stored remotely [abstract, Cabrera et al.].

As per claim 2, Cabrera et al. disclose wherein the data object comprises one or

more fields of one or more tables, and wherein the ID comprises one or more key fields

of the one or more tables [Figs. 4, 10, col. 20-15, in the form of an index into a data table,

such as remote data table 92 of FIG. 4 or any other information that allows the migration

state to be determined].

As per claim 3, Larsson et al. disclose the data object is stored in a file and

wherein an assignment of the ID to the file or to a name of the file, is stored in the first

lock object [Fig. 11, element LID table for Backup handler].

As per claim 4, the rejection of claim 1 incorporated, and further Nakano

discloses the first lock object is stored on a nonvolatile storage means [DBMS acceptance

program 310a and DBMS execution programs 320a to 320c are usually stored in a

recording medium including an optical disc; para 0045, lines 1-3].

As per claim 5, Larsson et al. disclose the ID is stored in the second lock object

after selecting the data object from the first storage location [Fig. 11, LID table for Data

Base handler].

As per claim 6, Larsson et al. disclose the ID is stored in the second lock object

before the data object is stored at the second storage location [When all objects in the

LID table have been copied the objects in the backup buffer will be copied to the backup

area; col 8, lines 11-13].

As per claim 7, Larsson et al. disclose storing the ID in the first lock object further comprises: storing IDs of other data objects stored in the first lock object before storing the data object at the second storage location [Fig. 8, element 140].

As per claim 8, Larsson et al. disclose checking whether the ID for the data object has been stored in the first lock object and if the ID has been stored, skipping storing the data object at the second storage location [Fig. 11, Pointers from LID table in Data Base Handler to LID table in Backup handler for Obj. B and Obj. C].

As per claim 9, Larsson et al. disclose checking whether the data object is contained in the second storage location and if the data object is contained in the second storage location, skipping storing the data object at the second storage location [the data base points to the objects B and D in the backup area 4, indicated by arrows 14 and 16; col 4, lines 45-47].

As per claim 10, Larsson et al. disclose the checking is performed by querying the first lock object [a "BackupSynch" variable which can take the values "Include" or "Exclude" and the value of which is used by the local data base handler and by the local backup handlers to decide whether objects shall be included in a backup or not; col 3, lines 1-5].

As per claim 11, Larsson et al. disclose checking whether the data object has been stored in the second storage location, and if the data object has not been stored,

skipping deleting the data object form the first storage location and skipping deleting the

ID from the first lock object [Fig. 3, Backup failed and then led to the stop of operation

since not all database handlers had acknowledged to create backups].

   As per claim 12, Larsson et al. disclose for use in an enterprise resource planning

software [backing up in a distributed real time data base on primary memory in operation,

all data in the data base are structured as belonging to one of several logic data bases;

abstract, lines 1-3].

   As per claim 13, is directed to a system claim carrying instructions for

performing the method of claim 1 and is rejected along the same rationale.

   As per claims 15, 17-26, are directed to a computer readable medium carrying

instructions for performing the methods of claims 1-11 respectively and therefore

rejected along the same rationale.

   As per claim 27, Larsson et al. disclose the computer readable medium is

provided as part of a computer program product [Such functionalities are programs or

steps executed by the computers involved; col 4, lines 19-21].

   As per claims 28-38, are directed to system claims carrying instructions for

performing the methods of claims 1-11 respectively and therefore rejected along the same

rationale.

Claims 39-46 are rejected under 35 U.S.C. 103(a) being unpatentable over

Larsson et al. (US 5,548,750) and Cabrera et al. (US 6,269,382) and further in view of

Chan (US 6,412,034).

As per claim 39, Larsson et al. and Cabrera et al. disclose storing the ID in the

second lock object as noted in claim 1 but do not explicitly disclose indicating that an

action is being performed on the data object.

Chan discloses indicating that an action is being performed on the data object

[Fig. 2C, Each entry 206 corresponds to a particular resource ("R1, R2 . . . RN") assigned

to lock manager LM and specifies a lock status for the particular resource, e.g. "

LOCKED" or "UNLOCKED", a process, if any, currently holding a lock on the particular

resource and a transaction with which the process is associated].

Larsson et al. and Chan are analogous are because they are in the same general

field of managing locks on transactions performed in a database environment.

At the time when the invention was made, it would have been obvious to a person

of ordinary skill in the art to modify the method of Larsson et al. and Cabrera et al. to

specify a lock status for the particular resource. The motivation for doing so would have

been that it was known in the art that transaction lock allows only one process at a time to

access a particular resource to maintain consistency (col. 1, lines 17-19, Chan).

As per claim 40, Chan discloses the method of claim 39, wherein deleting the ID

from the transactional type lock object indicates that the action is not being performed on

the data object [Figs. 2B, 2C, UNLOCKED].

As to claims 41-42, are directed to a computer system claim carrying instructions for performing the method of claims 39-40 and therefore rejected along the same rationale.

As to claims 43-44, are directed to a computer readable medium carrying instructions for performing the method of claims 39-40 and therefore rejected along the same rationale.

As to claims 45-46, are directed to a computer system claim carrying instructions for performing the method of claims 39-40 and therefore rejected along the same rationale.

Response to Amendment and Remarks

Applicant's arguments with respect to claims 1-13, 15, and 17-38 have been considered, but they are not deemed to be persuasive for the reasons set forth below.

Applicants argues on page 15 that Applicants respectfully traverse the provisional rejections of claims 1-13, 15, and 17-38 over copending U.S. Application Nos. 10/526,504 and 10/526,747, and request that the provisional rejections be held in abeyance. Both the copending applications are currently pending and, thus, no double patenting circumstances can arise until a patent is granted. Because no patent has yet issued from the two copending applications, Applicants respectfully request that the provisional rejections be held in abeyance and any resolution in the form of a terminal disclaimer or otherwise be deferred.... Section 804 indicates that "[t]he 'provisional' double patenting rejection should continue to be made by the examiner in each

application.., unless that 'provisional' double patenting rejection is the only rejection

remaining in at least one of the applications ....Applicants request that the provisional

non-statutory obviousness-type double patenting rejections be withdrawn should they be

the only remaining rejections in this application and none of the copending applications

has issued as a patent. The Examiner respectfully disagrees.

In response to the argument, it is noted that the application 10/526,504 is in the

processing of becoming a patent (with notice of allowance) and a terminal disclaimer is

required to overcome the double patent rejection as noted above. In addition, as indicated

by Applicants that a double patent should be sustained 'unless that 'provisional' double

patenting rejection is the only rejection remaining in at least one of the applications ".

Therefore, double patent rejection is maintained for the above reasons.

Applicants argues on page 16 that Applicants amend claims 15 and 17-27 to recite

a "computer readable storage medium." Accordingly, Applicants respectfully request that

the Examiner reconsider and withdraw the rejection of claims 13, 15, and 17-38 under 35

U.S.C. § 101.

However, the specification of the disclosure is completely silent on the subject

matter of "computer readable storage medium.". The specification of the application

defines that "Additionally, although aspects of the present invention are described for

being stored in memory, one skilled in the art will appreciate that these aspects can also

be stored on other types of computer -readable media, such as secondary storage devices,

for example, hard disks, floppy disks, or CD-ROM; the Internet or other propagation

medium; or other forms of RAM or ROM."(page 18). As such, the Examiner, in

examining claims 15, 17-27, and 43-44, interprets the limitation "computer readable

storage medium" includes only those medium or media that are statutory subject matter

such as hard disks, floppy disks, CD-ROM, RAM or ROM as indicated in the

specification (page 18). Examiner hereby withdraws the rejection of claims 13, 15, and

17-38 under 35 U.S.C. § 101.

Applicants argues on page 17 that as disclosed in the specification at page 12,

lines 15-19 and page 13, lines 1-19. Applicants further explain that, in accordance with

an exemplary embodiment of the claimed invention, if a process determines that the ID is

stored in the first lock object, then the process does not move the data object from the

first storage location to the second storage location because another process is performing

some action on the data object. Applicants submit that claims 8, 23, and 35 are

sufficiently definite in view of the specification. Accordingly, Applicants respectfully

request that the Examiner reconsider and withdraw the rejection of claims 7, 8, 22, 23,

34, and 35 under 35 U.S.C. § 112, second paragraph. The Examiner respectfully

disagrees.

In response to the argument, the "checking whether..." step cited in claim 8 does

not specified when it is executed, it is understood and common practice that the steps in

claim 1 are sequentially executed one after the other. Having this in mind, the limitations

cited in claim 8 do not make sense. Especially, if the "checking whether…" step are

performed after "determining whether the ID is stored successfully in the second lock

object and, upon a successful storage, storing the ID in a first lock object", the next step,

"storing the data object at the second storage location" will never be executed.

Applicants argues on pages 18-20 that no transaction log or variable in Larsson

"indicat[es] that the data object is stored [or not stored] at the first storage location," as

recited in claim 1. Therefore, Larsson fails to disclose or suggest "storing the ID in a first lock object, thereby indicating that the data object is stored at the first storage location" and "deleting the ID from the first lock object, thereby indicating that the data object is not stored at the first storage location," as recited in claim 1. Moreover, Nakano fails to cure the deficiencies of Larsson.

In response to the argument, for the newly amended limitations, " thereby indicating that the data object is stored at the first storage location... thereby indicating that the data object is not stored at the first storage location", is moot in view of the new ground(s) of rejection. Please refer to the claim analysis above for detail.

On page 21, the arguments of claims 2, 17, and 29 are directed to the similar argument of claim 1 which has been addressed above.

Thus, for the above reasons, it is believed that the rejection under 35 U.S.C. 103 provides substantial evidence to support the rationale statement in the above rejection, and the rejection under 35 U.S.C. 103 should be sustained.

Related Prior Arts

The following list of prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Bamford; Roger J. et al., US 6353836 B1, "Method and apparatus for transferring data from the cache of one node to the cache of another node".

- Lakhamraju; Mohana Krishna et al., US 6343296 B1, "On-line reorganization in object-oriented databases".

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shew-Fen Lin whose telephone number is 571-272-2672. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shew-Fen Lin /S. L./
Examiner, Art Unit 2166
June 15, 2008

/Hosain T Alam/

Supervisory Patent Examiner, Art Unit 2166